

Abstract of the Disclosure

A multi-band radio frequency (RF) receiving method in a mobile communication system having a reduced size and cost includes receiving RF wave signals for four or more non-overlapping bands, primarily filtering a first wide band including adjacent first and second bands and a second wide band including adjacent third and fourth bands from the received RF wave signals, low-noise amplifying the RF wave signals of the first and second wide bands, respectively, secondarily filtering a third wide band including adjacent second and third bands and a fourth wide band including first and fourth bands from the low-noise amplified RF wave signals of the first and second wide bands, generating two band RF wave signals to be simultaneously received, and frequency-down converting the two band RF wave signals generated in the secondary filtering step into two band intermediate frequency wave signals by means of first and second oscillation frequencies.